

IN THE DRAWINGS

Corrected drawings are supplied herewith.

Enclosed are original drawing of FIG.5 (Marked "Original Drawings of FIG.5)

Enclosed is a Replacement Sheet showing the following amendment to Figure 5 (Marked "Replacement Sheet of Drawings of FIG.5")

Add arrow and donation 510 for FIG.5a

Add arrows for indicating 511 513 and 515 in FIG.5e

Replace 425 and 425 with 540 and 542 in FIG.5g

Enclosed is a copy of FIGs 5a, 5e and 5g showing the proposed amendment to Figure 5 in red ink (Marked "Replacement Sheet Showing Changes")

REMARKS/ARGUMENTS

This is in response to the Office Action dated May 4, 2005.

Claims 29-36, 38-39 are amended, Claims 37 and 40 are cancelled, and Claim 50 and 51 are new.

The amendments to the abstract, the specification, the drawings, and the claims are directed to corrections of the spelling errors and objections noted in the office action. It is believed that no new matter is introduced by the amendments.

Applicant respectfully requests entry of the amendments and withdrawal of the claim rejections.

The 35 U.S.C. §112, Second Paragraph (indefiniteness)

Claims 29-36, 38-39 are amended per the suggestions of the Office Action on page 7. Claims 37 and 40 are cancelled. The amendments to the claims are made to improve their form and clarity without adding new subject matter.

Accordingly, the amendment of claims 29-40 renders the §112 (2) rejection moot. Withdrawal of the rejection of Claims 29-40 under 35 U.S.C. §112 (2) is respectfully requested.

The 35 U.S.C. §102 Rejection

Claims 29-34 and 37-40 were rejected under 35 USC 102(b) as being anticipated by Carpentier et al. (USPN 6,039,759).

Carpentier et al. discloses a trileaflet prosthetic valve. However, the valve designs in the instant application are fundamentally different from that of Carpentier's patent. As shown in Figures 4n-4s and Figure 5 of the instant application, the hinges are open structures with internal openings shaped as triangular, circular or butterfly. This element is critical as it allows complete wash of the hinge area during each cardiac cycle. According to this design, the hinge area will be completely closed when the valve is in close position, and therefore, no leaking will occur. The hinges disclosed in Carpentier's patent are solid and have no openings in the structure. Additionally, they are disposed on the inner surface of the annular valve body.

The hinges of the instant application, to the contrary, are spaced around on one side of the annular body.

In addition, the leaflets of Carpentier's patent have protrusions (shown as 542 in Fig. 23 for example). The closed hinges and the protrusions around the tip of the leaflets would cause incomplete washing, and potentially result in clotting. In the instant application, the leaflet designs are simplified; they are flat and have opposed ears on the same surface.

Claims 29-34 and 37-39 are amended to clarify the distinctions of the instant application. Accordingly, withdrawal of 35 USC 102(b) rejection is requested.

The 35 U.S.C. §103 Rejection

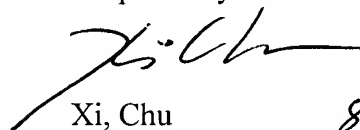
Claim 35 was rejected under 35 USC 103(a) as being unpatentable over Carpentier et al. in view of Shu et al (USPAP 2001/0025197 A1).

Applicant submits that the proposed combination of the two references does not teach or suggest the elements recited in the amended Claim 35. In view of the present amendments to independent claim 29, applicants believe the present rejections to be obviated. Withdrawl of the rejection is requested.

CONCLUSION

Applicant respectfully submits that the pending claims are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

Respectfully submitted,



Xi, Chu

8/29/05



Original Drawings of FIG.5

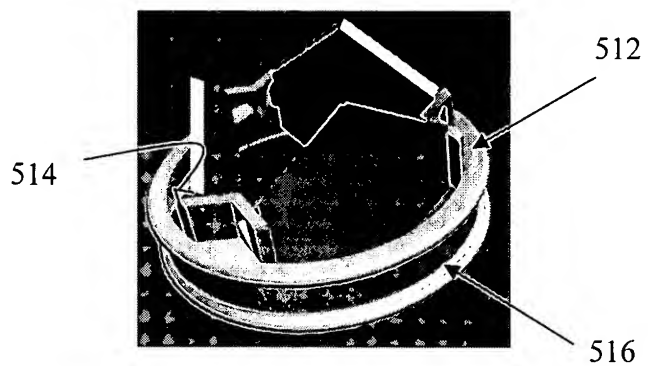


FIG. 5a

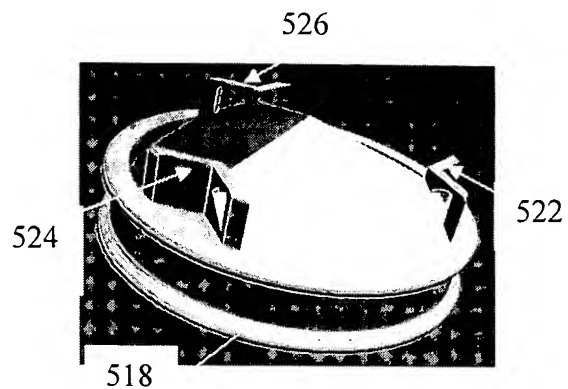


FIG. 5b

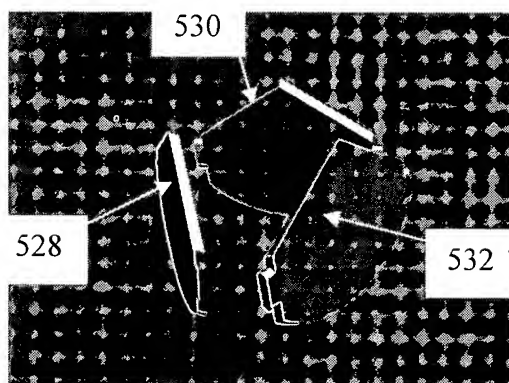


FIG. 5c

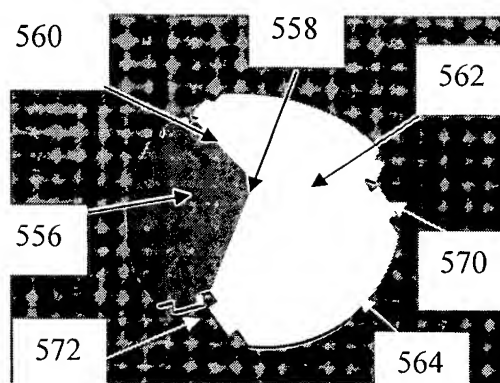


FIG. 5d

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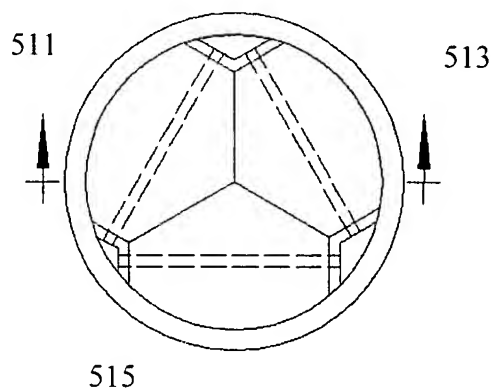


FIG. 5e

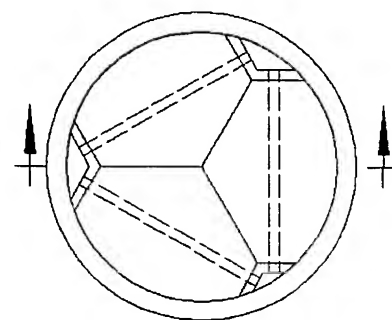


FIG. 5f

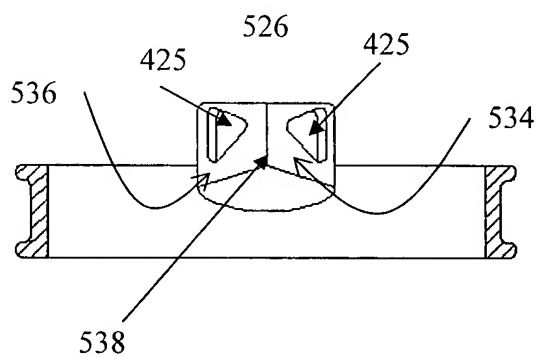


FIG. 5g

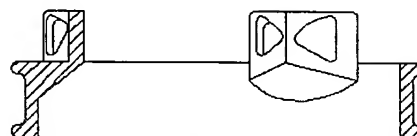


FIG. 5h

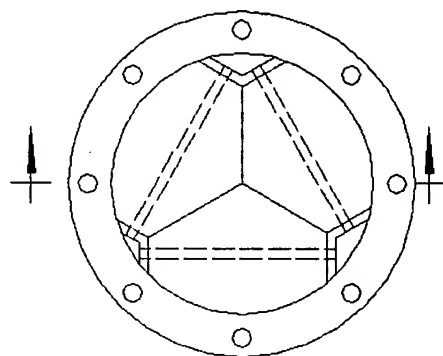


FIG. 5i

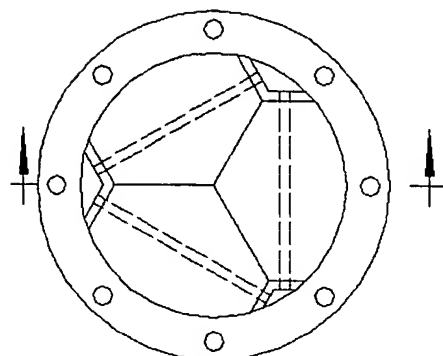


FIG. 5j

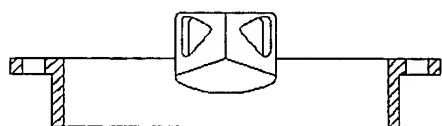


FIG. 5k

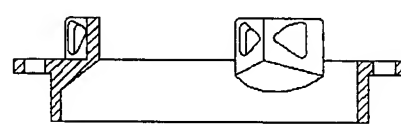


FIG. 5l

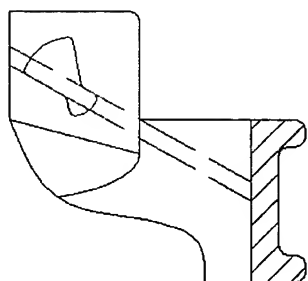


FIG. 5m

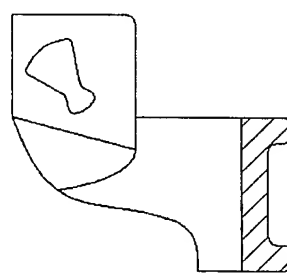


FIG. 5n

Replacement Sheet Showing Changes

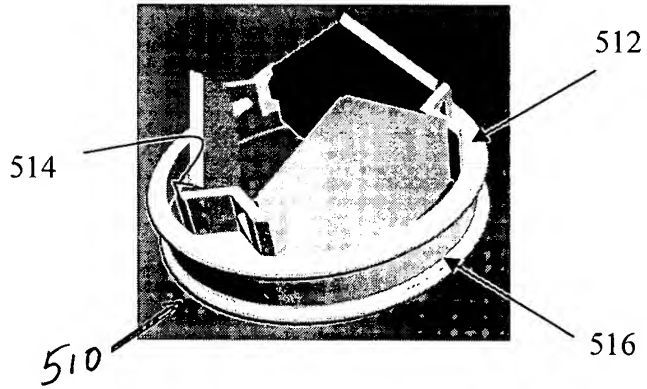


FIG. 5a

BEST AVAILABLE COPY

Replacement Sheet Showing Changes

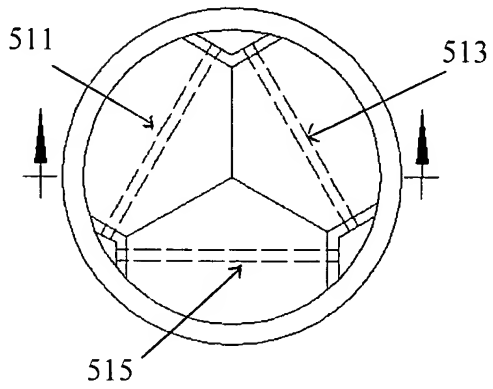


FIG. 5e

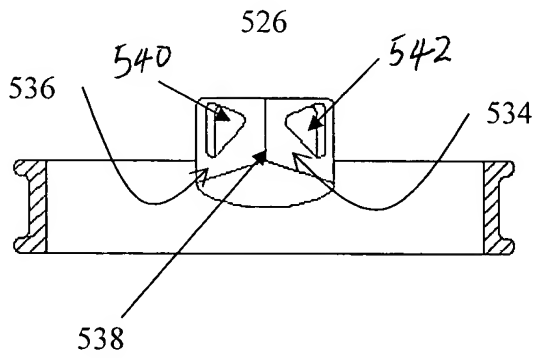


FIG. 5g